

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): Near-infrared light-absorbing glass comprising, denoted as cationic percentages, 23 to 41 percent of P^{5+} , 4 to 16 percent of Al^{3+} , 11 to 40 percent of Li^{+} , 3 to 13 percent of Na^{+} , 12 to 53 percent of R^{2+} (where R^{2+} denotes the total of Mg^{2+} , Ca^{2+} , Sr^{2+} , Ba^{2+} , and Zn^{2+}), 0 to 6 percent of Zn^{2+} and 2.6 to 4.7 percent of Cu^{2+} , and F^{-} and O^{2-} as anionic components;

wherein the glass is fluorophosphates glass essentially comprising no arsenic and no lead.

2. (previously presented): The near-infrared light-absorbing glass according to claim 1, wherein the glass comprises Zn^{2+} as a cationic component.

3. (original): The near infrared light-absorbing glass according to claim 1, wherein the glass comprises, denoted as anionic percentages, 25 to 48 percent of F^{-} and 52 to 75 percent of O^{2-} .

4. (currently amended): Near-infrared light-absorbing glass wherein,
a thickness of the glass, at which the glass exhibits a property that wavelength at which a 50 percent transmittance is exhibited is 615 nm, is in a range of from 0.1 to 0.8 mm,

a transmittance at a wavelength of 400 nm is 80 percent or more at the thickness at which the glass exhibits said property,

a transmittance at a wavelength of 800 to 1000 nm is less than 5 percent, a the thickness at which the glass exhibits said property,

a transmittance at a wavelength of 1200 nm is less than 20 percent at the thickness at which the glass exhibits said property, and

the glass is fluorophosphates glass essentially comprising no arsenic and no lead and having a content of Zn^{2+} equal to or less than 6 cation percent.

5. (original): The near-infrared light-absorbing glass according to claim 1, wherein the glass has a liquid phase temperature of 750° C or less.

6. (original): The near-infrared light-absorbing glass according to claim 4, wherein the glass has a liquid phase temperature of 750° C or less.

7. (currently amended): Near-infrared light-absorbing glass, wherein the glass exhibits properties, based on a thickness of 0.5 mm,

that a first wavelength, at which a 50 percent transmittance is exhibited, is shorter than 630 nm,

transmittance at a second wavelength of said first wavelength to 700 nm is less than 50 percent,

transmittance at a third wavelength of 400 nm to said first wavelength is higher than 50 percent,

the viscosity at a liquid phase temperature is 0.5 Pa.multidot.s or more, and

the glass is copper-containing fluorophosphates glass essentially comprising no arsenic and no lead and having a content of Zn²⁺ equal to or less than 6 cation percent.

8. (original): The near-infrared light-absorbing glass according to claim 4 which is copper-containing fluorophosphate glass.

9. (canceled).

10. (original): A near-infrared light-absorbing element comprised of the near-infrared light-absorbing glass according to claim 1.

11. (original): A near-infrared light-absorbing element comprised of the near-infrared light-absorbing glass according to claim 4.

12. (original): A near-infrared light-absorbing element comprised of the near-infrared light-absorbing glass according to claim 7.

13. (original): A near-infrared light-absorbing filter comprising a glass plate comprised of the near-infrared light-absorbing glass according to claim 1.

14. (original): A near-infrared light-absorbing filter comprising a glass plate comprised of the near-infrared light-absorbing glass according to claim 4.

15. (original): A near-infrared light-absorbing filter comprising a glass plate comprised of the near-infrared light-absorbing glass according to claim 7.

16. (original): A method of manufacturing a near-infrared light-absorbing formed glass article, wherein melted glass having a temperature of 710°C or less is formed and cooled to manufacture a formed glass article comprised of the near-infrared light-absorbing glass according to claim 7.

17. (original): Copper-containing glass comprised of fluorophosphate glass or phosphate glass comprising 0.1 weight percent or more of copper based on CuO, 0.005 to 0.5 weight percent of iron based on Fe₂O₃, 0.01 to 1 weight percent of antimony based on Sb₂O₃, and no arsenic.

18. (original): The copper-containing glass according to claim 17, wherein the glass exhibits properties, in the spectral transmittance of wavelengths of 400 to 1,200 nm, based on a thickness of 0.45 nm,

that wavelength (λ_{50}), at which a 50 percent transmittance is exhibited, ranges from 605 to 625 nm,

transmittance at a wavelength of 400 nm is 80 percent or more, and

transmittance at a wavelength of 1200 nm is less than 22 percent.

19. (original): The copper-containing glass according to claim 17, wherein the glass comprises, denoted as cationic percentages,

P⁵⁺ 11 to 43 percent

Al³⁺ 4 to 16 percent

R₁⁺ 0.1 to 43 percent

(where R₁⁺ is the total of Li⁺, Na⁺, and K⁺)

R₂²⁺ 12 to 53 percent

(where R₂²⁺ is the total of Mg²⁺, Ca²⁺, Sr²⁺, Ba²⁺, and Zn²⁺)

Cu^{2+} 1.0 to 4.7 percent,
as well as comprises F^- and O^{2-} as anionic components.

20. (original): The copper-containing glass according to claim 19, wherein the glass does not comprise a nitrate.

21. (original): A near-infrared light-absorbing element comprised of the copper-containing glass according to claim 17.

22. (original): A near-infrared light-absorbing filter comprising the near-infrared light-absorbing element according to claim 21.

23. (new): Near-infrared light-absorbing glass comprising, denoted as cationic percentages, 23 to 41 percent of P^{5+} , 4 to 16 percent of Al^{3+} , 11 to 40 percent of Li^+ , 3 to 13 percent of Na^+ , 12 to 53 percent of R^{2+} (where R^{2+} denotes the total of Mg^{2+} , Ca^{2+} , Sr^{2+} , Ba^{2+} , and Zn^{2+}), and 2.6 to 4.7 percent of Cu^{2+} , and F^- and O^{2-} as anionic components;

wherein the glass is fluorophosphates glass essentially comprising no arsenic and no lead, and denoted as having an anionic percentage of 25 to 48 percent of F.

24. (new): The near-infrared light-absorbing glass according to claim 23, wherein the glass comprises Zn^{2+} as a cationic component.

25. (new): The near infrared light-absorbing glass according to claim 23, wherein the glass comprises, denoted as anionic percentages, 25 to 48 percent of F^- and 52 to 75 percent of O^{2-} .

26. (new): The near-infrared light-absorbing glass according to claim 23, wherein the glass has a liquid phase temperature of 750° C or less.

27. (new): A near-infrared light-absorbing element comprised of the near-infrared light-absorbing glass according to claim 23.

28. (new): A near-infrared light-absorbing filter comprising a glass plate comprised of the near-infrared light-absorbing glass according to claim 23.

29. (new): Near-infrared light-absorbing glass wherein,

a thickness of the glass, at which the glass exhibits a property that wavelength at which a 50 percent transmittance is exhibited is 615 nm, is in a range of from 0.1 to 0.8 mm,

a transmittance at a wavelength of 400 nm is 80 percent or more at the thickness at which the glass exhibits said property,

a transmittance at a wavelength of 800 to 1000 nm is less than 5 percent, at the thickness at which the glass exhibits said property,

a transmittance at a wavelength of 1200 nm is less than 20 percent at the thickness at which the glass exhibits said property, and

the glass is fluorophosphates glass essentially comprising no arsenic and no lead, and denoted as having an anionic percentage of 25 to 48 percent of F..

30. (new): The near-infrared light-absorbing glass according to claim 29, wherein the glass has a liquid phase temperature of 750° C or less.

31. (new): The near-infrared light-absorbing glass according to claim 29 which is copper-containing fluorophosphate glass.

32. (new): A near-infrared light-absorbing element comprised of the near-infrared light-absorbing glass according to claim 29.

33. (new): A near-infrared light-absorbing filter comprising a glass plate comprised of the near-infrared light-absorbing glass according to claim 29.

34. (new): Near-infrared light-absorbing glass, wherein the glass exhibits properties, based on a thickness of 0.5 mm,

that a first wavelength, at which a 50 percent transmittance is exhibited, is shorter than 630 nm,

transmittance at a second wavelength of said first wavelength to 700 nm is less than 50 percent,

transmittance at a third wavelength of 400 nm to said first wavelength is higher than 50 percent,

the viscosity at a liquid phase temperature is 0.5 Pa.s or more, and

the glass is copper-containing fluorophosphates glass essentially comprising no arsenic and no lead, and denoted as having an anionic percentage of 25 to 48 percent of F..

35. (new): A near-infrared light-absorbing element comprised of the near-infrared light-absorbing glass according to claim 34.

36. (new): A near-infrared light-absorbing filter comprising a glass plate comprised of the near-infrared light-absorbing glass according to claim 34.

37. (new): A method of manufacturing a near-infrared light-absorbing formed glass article, wherein melted glass having a temperature of 710°C or less is formed and cooled to manufacture a formed glass article comprised of the near-infrared light-absorbing glass according to claim 34.